

AMENDMENTS TO THE CLAIMS

1. (Original) An image encoding device comprising:

an image signal input circuit receiving an image signal and dividing the image signal into macroblocks to generate block-divided image signals;

an image encoding circuit encoding the block-divided image signals output from the image signal input circuit, and outputting encoded image signals to a transmission path;

an encoded region designator designating regions to be encoded by the image encoding circuit according to a bit rate of the transmission path;

wherein said image encoding circuit encodes only those regions which are designated by said encoded region designator.

2. (Currently Amended) The image encoding ~~circuit~~ device as set forth in claim 1, wherein said encoded region designator receives the bit rate of the transmission path and a motion vector detected by said image encoding circuit, and designates the encoded regions based on them.

3. (Currently Amended) The image encoding ~~circuit~~ device as set forth in claim 1, wherein said encoded region designator receives the bit rate of the transmission path and region information ~~input~~

~~from the outside~~, and designates the encoded regions based on them.

4. (Currently Amended) An image encoding device comprising:

an image signal input circuit receiving an image signal and dividing the image signal into macroblocks to generate block-divided image signals;

an image encoding circuit encoding the block-divided image signals output from the image signal input circuit, and outputting encoded image signals to a transmission path;

ag a bit selector limiting the number of bits per pixel of the image signal to be encoded by the image encoding circuit according to a bit rate of the transmission path.

5. (New) The image encoding device as set forth in claim 2, said encoded region designator including:

a motion vector converter receiving the motion vector and converting the motion vector into a horizontal motion vector value and a vertical motion vector value;

a first comparator comparing the horizontal motion vector value to a first threshold;

a second comparator comparing the vertical motion vector value to a second threshold; and

a logical OR circuit receiving comparison results from said first and second comparators,

wherein the first and second thresholds are based on the bit rate of the transmission path, and

wherein the comparison results are true when the respective motion vector value is greater than the respective threshold such that only those macroblocks having a motion vector value exceeding a respective one of the thresholds are designated by said encoded region designator.

a⁹ 6. (New) The image encoding device as set forth in claim 5,
said image encoding circuit including a region selector selecting which regions of the block-divided image signals are to be encoded and which are not to be encoded and;

said region selector being controlled by said encoded region designator such that only those macroblocks designated by said encoded region designator are selected by said region selector for encoding by said image encoding circuit.

7. (New) The encoding device as set forth in claim 3, said encoded region designator including:

an address decoder receiving the region information and the bit rate of the transmission path, said address decoder setting horizontal and vertical start/end positions of the designated region to be encoded according to the bit rate of the transmission

path;

a first comparator comparing the horizontal start/end positions against a horizontal macroblock count;

a second comparator comparing the vertical start/end positions against a vertical macroblock count;

a logical AND circuit receiving comparison results from said first and second comparators,

ag wherein the comparison results are true when the respective macroblock counts are between the corresponding start and end positions.

8. (New) The image encoding device as set forth in claim ~~7~~,

said image encoding circuit including a region selector selecting which regions of the block-divided image signals are to be encoded and which are not to be encoded and;

said region selector being controlled by said encoded region designator such that only those macroblocks designated by said encoded region designator are selected by said region selector for encoding by said image encoding circuit.

9. (New) The image encoding device as set forth in claim ~~4~~, said bit selector including:

a bit number determining circuit receiving the bit rate of the

transmission path and determining the number of most significant bits per pixel of the image signal according to the bit rate of the transmission path; and

a selector receiving the block-divided image signals and selecting the determined number of most significant bits per pixel from the block-divided image signals,

wherein the number of most significant bits per pixel varies according to the bit rate of the transmission path.

a⁹ 10. (New) An image encoding device comprising:

an image signal input circuit receiving an image signal and dividing the image signal into macroblocks to generate block-divided image signals;

an image encoding circuit encoding the block-divided image signals output from the image signal input circuit, and outputting encoded image signals to a transmission path;

a first encoded region designator receiving a bit rate of the transmission path and a motion vector detected by said image encoding circuit, and designating a first encoded region based on the bit rate of the transmission path and the motion vector;

a second encoded region designator receiving the bit rate of the transmission path and region information, and designating a second encoded region based on the bit rate of the transmission path and the region information;

wherein said image encoding circuit encodes only those regions which are designated by both said first and second encoded region designators.

11. (New) The image encoding device as set forth in claim ~~10~~, further comprising:

a logical AND circuit performing a logical AND function between the first and second designated encoded regions.

12. (New) The image encoding device as set forth in claim ~~10~~, further comprising:

a bit selector limiting the number of bits per pixel of the image signal to be encoded by the image encoding circuit according to a bit rate of the transmission path

13. (New) The image encoding device as set forth in claim 12, said bit selector including:

a bit number determining circuit receiving the bit rate of the transmission path and determining the number of most significant bits per pixel of the image signal according to the bit rate of the transmission path; and

a selector receiving the block-divided image signals and selecting the determined number of most significant bits per pixel from the block-divided image signals,

wherein the number of most significant bits per pixel varies according to the bit rate of the transmission path.

14. (New) An image encoder, comprising:

an image signal input circuit operatively connected to an input receiving an image signal, said image signal input circuit dividing the image signal into macroblocks to generate block-divided image signals;

an image encoding circuit operatively connected to said image signal input circuit and to a transmission path, said image encoding circuit encoding the block-divided image signals and outputting encoded image signals to the transmission path;

an encoded region designator operatively connected to said image encoding circuit, said encoded region designator designating regions to be encoded by said image encoding circuit based on a bit rate of the transmission path;

wherein said image encoding circuit selectively encodes regions which are designated by said encoded region designator.

15. (New) The image encoder as set forth in claim 14, wherein said encoded region designator receives the bit rate of the transmission path and at least one of a motion vector detected by said image encoding circuit and region information, said encoded region designator designating the encoded regions based on the bit rate

and at least one of the motion vector and region information.

16. (New) The image encoder as set forth in claim 14, wherein said encoded region designator receives the bit rate of the transmission path and region information, and designates the encoded regions based on them.

17. (New) An image encoder, comprising:

an image signal input circuit operatively connected to an input receiving an image signal, said image signal input circuit dividing the image signal into macroblocks to generate block-divided image signals;

an image encoding circuit operatively connected to said image signal input circuit and to a transmission path, said image encoding circuit encoding the block-divided image signals and outputting encoded image signals to the transmission path; and

a bit selector operatively connected to an interposed between said image signal input circuit and said image encoding circuit, said bit selector limiting the number of bits per pixel of the image signal to be encoded by the image encoding circuit according to a bit rate of the transmission path.

18.

(New) An image encoding method comprising:

receiving an image signal and dividing the image signal into macroblocks to generate block-divided image signals;

encoding the block-divided image signals and outputting encoded image signals to a transmission path; and

designating regions to be encoded by the said encoding step according to a bit rate of the transmission path;

wherein said encoding step encodes only those regions which are designated by said designating step.

19. (New) The image encoding method as set forth in claim 18, further comprising:

receiving the bit rate of the transmission path and a motion vector detected by said encoding step,

said designating step designating the encoded regions based on the bit rate of the transmission path and the motion vector.

20. (New) The image encoding method as set forth in claim 18, further comprising:

receiving the bit rate of the transmission path and region information,

said designating step designating the encoded regions based on the bit rate of the transmission path and the region information.

21. (New). An image encoding method comprising:

receiving an image signal and dividing the image signal into macroblocks to generate block-divided image signals;

encoding the block-divided image signals and outputting encoded image signals to a transmission path; and

limiting the number of bits per pixel of the image signal to be encoded by the said encoding step according to a bit rate of the transmission path.
